



PATENT SPECIFICATION

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COMPLETE SPECIFICATION.

Improvements in or relating to Cage Nuts.

I, CYRIL LORENZO FIELD, a British Subject, of 5 Badsey Close, Northfield, Birmingham 31, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention comprises improvements in or relating to cage nuts of the kind in which the cage is adapted for welding to a metal sheet or the like, and has for its object to provide an improved construction of cage for holding the nut.

A cage nut according to the present invention is characterized by a rectangular cage member comprising a base and sides, two or more sides of which have provided in alignment therewith projections and a closure member having an aperture formed therein through which the threaded portion of the stud or bolt is adapted to pass.

Referring to the drawings:—

Figure 1 is a perspective view of a cage nut according to this invention ;

Figure 2 is an underside plan view of the cage nut shown in Figure 1 ;

Figure 3 is a perspective view of the underside of the cage nut ; and

Figure 4 is a section taken on the line 2—2 in Figure 2.

In carrying the present invention into practice as shown upon the accompanying drawings, a cage for cage nuts is formed by a cold drawn rectangular shaped receptacle, comprising a base 5 and sides 6, the four sides 6 of the receptacle being provided at their centres with a projection or nib 7 which is adapted for use in projection welding the cage nut in position onto a metal sheet or the like. An aperture 8 is formed in the base 5 of the receptacle through which the end of a stud or bolt may pass, whilst located in said receptacle is a rectangular screwed nut 9 which is adapted to float therein.

The receptacle is closed in assembly by

means of a thin metal closure member 10 which is preferably domed and pressed from strip material, the two oppositely disposed edges thereof are formed with a recess 11 in which are located the two oppositely disposed projections or nibs 7 on the receptacle, so that on nibbing or otherwise opening these projections the closure member 10 is retained in position and the screwed nut 9 retained in the receptacle.

The closure member 10 at its centre is formed with a rectangular or other suitably shaped aperture 12 therein through which the screwed stud or bolt is adapted to pass, whilst the periphery of this aperture 12 is formed with a down turned edge 13 which is adapted to form a pilot for locating the cage in position on a metal sheet or the like in which is punched a rectangular or other suitably shaped aperture to accommodate the pilot of the cage to which it is to be projection welded.

The closure member 10 may, if desired, be formed slightly larger than the space between the four projections on the receptacle and can be sprung into position between same.

The closure member 10 may be lacquered or otherwise treated with an electrically insulating medium so that in the welding of the cage nut into position the current will be carried by the projections on the receptacle and not through the closure member, thus reducing the amount of current carried in welding the cage nut in position.

What I claim is:—

1. Improvements in or relating to cage nuts for welding to metal sheets in the like characterized by a rectangular cage member comprising a base and sides, two or more sides of which have provided in alignment therewith projections and a closure member having an aperture formed therein through which the threaded portion of the stud or bolt is adapted to pass.

2. In a cage nut according to Claim 1,

the provision of a pilot on the closing member for locating the cage nut in position for welding.

3. In a cage nut according to Claim 2, forming the peripheral edge of the aperture in the closure member as a depending edge.

4. In a cage nut according to Claim 1, coating the closure member with an electric insulating medium to reduce current con-

sumption when welding the cage nut in position.

5. The improved cage nut, substantially as described and illustrated on the accompanying drawing.

NORMAN S. BARLOW,
Chartered Patent Agent,
Agent for Applicant.

PROVISIONAL SPECIFICATION.

Improvements in or relating to Cage Nuts.

15 I, CYRIL LORENZO FIELD, a British Subject, of 5 Badsey Close, Northfield, Birmingham 31, do hereby declare this invention to be described in the following statement:—

This invention comprises improvements in or relating to cage nuts of the kind in which the cage is adapted for welding to a metal sheet or the like and has for its object to provide an improved construction of cage for holding said nuts.

25 A cage nut according to the present invention is characterized by a rectangular cage member comprising a base and sides, two or more sides of which have provided in alignment therewith projections and a closure member having an aperture formed therein through which the threaded portion of the stud or bolt is adapted to pass.

In carrying the present invention into practice, a cage for cage nuts is formed by a cold drawn rectangular shaped receptacle, comprising a base and sides, the four sides of the receptacle being provided at their centres with a nib which is adapted for use in projection welding the cage nut in position, on the metal sheet or the like. An aperture is formed in the base of the receptacle through which the end of the stud or bolt may pass, whilst located in said receptacle is a rectangular screwed nut which is adapted to float therein.

The receptacle is closed in assembly by means of a thin metal closure member which is preferably domed and pressed from strip

material the two oppositely disposed edges thereof are formed with a recess in which are located the two oppositely disposed projections on the receptacle, so that on rivetting these projectings the closure member is retained in position and the screwed nut retained in the receptacle.

The closure member at its centre is formed with a rectangular aperture therein through which the screwed stud or bolt is adapted to pass, whilst the periphery of this aperture is formed with a down turned edge which is adapted to form a pilot for locating the cage nut in position on the metal sheet or the like in which is punched a square hole to accommodate the pilot to which it is to be projection welded.

The closure member may, if desired, be formed slightly larger than the space between the four projections on the receptacle and can be sprung into position between same.

The closure member may be lacquered and so form an insulator so that in the welding of the cage nut into position the current will be carried by the projections on the receptacle and not through the closure member, thus reducing the amount of current carried in the welding of the cage nut in position.

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FIG. 1.

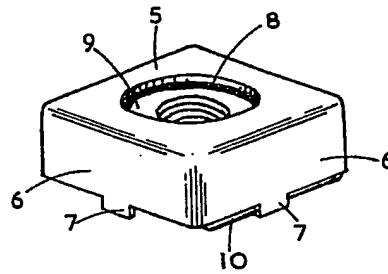


FIG. 2.

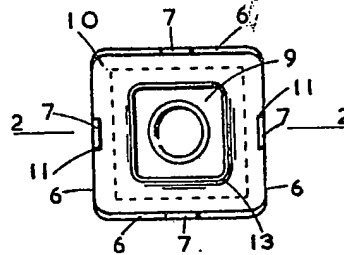


FIG. 3.

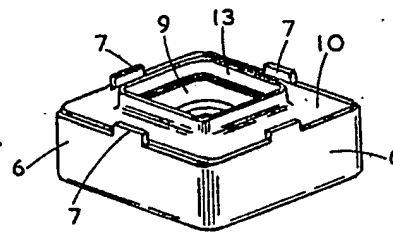


FIG. 4.

